

h1
a transport mechanism for transporting the bills, one at a time, from the input receptacle past an evaluation region to the at least one output receptacle along a transport path, the transport mechanism being adapted to transport bills such that a wide edge of the bills is the leading edge of the bills;

Q1
a magnetic scanhead disposed adjacent to the bill evaluation region, the scanhead including at least two closely spaced magnetic sensors each adapted to detect the presence of a magnetic attribute of currency bills, the at least two magnetic sensors being adapted to scan a substantially continuous segment of each of the bills, the substantially continuous segment being parallel to the wide edge of the currency bills, the scanhead being adapted to retrieve magnetic characteristic information from the currency bill;

a memory adapted to store master magnetic characteristic information corresponding to a plurality of types of currency bills; and

an evaluating unit adapted to evaluate the currency bill by comparing the retrieved magnetic characteristic information to the stored master magnetic characteristic information, the evaluating unit being adapted to generate an error signal when the retrieved magnetic characteristic information does not favorably compare to the stored master magnetic characteristic information.

149. (New) The currency evaluation device of claim 147 wherein the spacing between each of the at least two magnetic sensors is less than about one millimeter.

REMARKS

Claims 129-145 have been cancelled. Claims 146-149 have been added. Thus, claims 1-128 and 146-149 are pending in the present application and are attached hereto captioned "Pending Claims After Entry of Amendment and Reply to Office Action Mailed November 6, 2002."

Specification Objection

The Office Action Summary sheet indicates that the specification of the present application is objected to by the Examiner. However, the body of the Office Action does not set forth any specification objection by the Examiner. Applicants respectfully request that the Examiner set forth any objection to the specification in the next official action.

Applicants do acknowledge that the Examiner has indicated that the specification is lengthy and that the Examiner has not checked the specification to the extent necessary to determine the presence of all possible minor errors. Applicants will certainly correct any errors in the specification that Applicants may become aware of.

Claim Rejections – 35 U.S.C. § 102 (Ishida et al.)

Claims 1-145 have been rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,419,423 to Ishida et al. (“Ishida”). Applicants respectfully traverse this rejection.

Ishida appears to be directed to a bill acceptor that receives and processes one currency bill at a time: “the paper money [is] fed through the paper money transporter section 4 into a paper money accommodation box 6” (col. 4, ll. 22-25). The Ishida device includes “a paper money processor” used “for determination of whether or not the inserted paper money is genuine” (col. 2, ll. 8-9; col. 2, ll. 20-21). The Ishida device includes a left-hand detector and a right-hand detector – “magnetic sensor 31 is comprised of two magnetic sensors LHD and RHD” (col. 7, ll. 22-23) – for magnetically scanning two regions of a bill disposed on opposite sides of a bill. Put another way, the left-hand detector LHD scans a segment on the left-hand portion of a bill and the right-hand detector RHD scans a segment on the right-hand portion of a bill and the outputs of the magnetic sensor are used in determining whether a currency bill is genuine (col. 9, ll. 63-66).

Applicants’ claims 1-57 and 90-101 include the limitation of “receiving a stack of bills in an input receptacle” or “an input receptacle for receiving a stack of bills.” Ishida does not disclose this limitation. Rather, Ishida discloses a bill acceptor that receives one currency bill at a time. Therefore, because Ishida does not disclose each element of Applicants’ claims 1-57 and 90-101, Applicants respectfully submit that claims 1-57 and 90-101 are patentable over Ishida under 35 U.S.C. §102(a) for at least this reason.

Applicants’ claims 7-111 include the limitation of “closely spaced magnetic sensors.” Conversely, Ishida shows in FIG. 7 that the LHD magnetic sensor and the RHD magnetic sensor are spaced apart: “the two magnetic sensors LHD and RHD are disposed at the right and left sides of the paper money transport path 10” (col. 7, ll. 29-31). Therefore, because Ishida does not disclose that the LHD and RHD are “closely spaced,” Applicants respectfully submit that claims 7-111 are patentable over Ishida under 35 U.S.C. §102(a) for at least this reason.

Applicants' claims 112-128 include the following limitation: "the plurality of sensors collectively scan a substantially continuous segment of each of the currency bills transported along a bill transport path." Conversely, Ishida shows in FIG. 7 that the LHD and RHD are spaced apart. Ishida does not disclose that the LHD and RHD collectively scan a "substantially continuous segment" of paper money transported along the paper transport path. Therefore, because Ishida does not disclose each element of Applicants' claims 112-128, Applicants respectfully submit that claims 112-128 are patentable over Ishida under 35 U.S.C. §102(a) for at least this reason.

Claim Rejections – 35 U.S.C. §102 (Takesako)

Claims 1-145 have been rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 4,94,963 to Takesako ("Takesako"). Applicants respectfully traverse this rejection.

Each of the claims pending in the present application are directed to a device or method that includes the limitation of "magnetic sensors" or a "magnetic scanhead." Takesako, however, does not disclose these uses of magnetic sensors or a magnetic scanhead. Rather, Takesako discloses an apparatus for sorting bills having a bill "judging section 32" which "judges bills according to light permeability thereof" (Takesako at col. 3, ll. 20-23). Takesako does not disclose judging bills with magnetic sensors. Therefore, because Takesako does not disclose each element of Applicants' claims 1-128, Applicants respectfully submit that claims 1-128 over Takesako under 35 U.S.C. §102(a) for at least this reason.

Claim Rejections – 35 U.S.C. §102 (Takizawa et al.)

Claims 1-145 have been rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,201,395 to Takizawa et al. ("Takizawa"). Applicants respectfully traverse this rejection.

Takizawa is directed to "a bill examination device used in an automatic cash deposit/dispensation machine or an automatic vending machine" (col. 1, ll. 5-9; col. 2, ll. 23-28). The device of Takizawa does not have an input receptacle adapted to receive a stack of bills. Rather, Takizawa discloses a bill acceptor that receives and processes one bill at a time. *See, e.g.*, Takizawa at col. 1, ll. 11-17 ("[w]hen a bill (i.e., bank note or paper currency) is inserted or entered by a customer into an automatic cash deposit/dispensation machine or an

automatic vending machine, the denomination of the bill is identified and the authenticity of the bill is tested.”).

Applicants’ claims 1-57 and 90-101 include the limitation of “receiving a stack of bills in an input receptacle” or “an input receptacle for receiving a stack of bills.” Takizawa does not disclose this limitation. Rather, Takizawa discloses a bill acceptor that receives one currency bill at a time. Therefore, because Takizawa does not disclose each element of Applicants’ claims 1-57 and 90-101, Applicants respectfully submit that claims 1-57 and 90-101 are patentable over Ishida under 35 U.S.C. §102(a) for at least this reason.

Applicants’ claims 7-111 include the limitation of “closely spaced magnetic sensors.” Takizawa does not disclose closely spacing magnetic sensors. Rather, Takizawa only discloses that “the detecting elements are disposed at different positions” across the bill conveyance path (col. 3, ll. 2-4). Therefore, because Takizawa does not disclose all the limitations of claims 7-111, Applicants respectfully submit that claims 7-111 are patentable over Ishida under 35 U.S.C. §102(a) for at least this reason.

Applicants’ claims 112-128 include the limitation “the plurality of sensors collectively scan a substantially continuous segment of each of the currency bills transported along a bill transport path.” Takizawa does not disclose that a plurality of the detecting elements collectively scan a substantially continuous segment of each currency bill. Therefore, because Takizawa does not disclose all the limitations of claims 7-111, Applicants respectfully submit that claims 112-128 are patentable over Takizawa under 35 U.S.C. §102(a) for at least this reason.

Claim Rejections – 35 U.S.C. §102 (Yoshihara)

Claims 1-145 have been rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,301,786 to Yoshihara (“Yoshihara”). Applicants respectfully traverse this rejection.

Yoshihara is directed to “validating a paper-like piece such as a bill or bank note, a note used as a substitute for money, a gift card or a bill made of plastics” (col. 1, ll. 9-12; col. 3, ll. 64-68). It is clear that the device of Yoshihara, as shown in FIG. 5, for example, does not have an input receptacle adapted to receive a stack of bills, but rather appears to be used as a bill acceptor for receiving a single bill at a time. Further, Yoshihara does not disclose the use of a “magnetic scanhead or “magnetic sensors.” Rather, Yoshihara discloses validating paper-like pieces using an optical sensor.

Each of the claims pending in the present application are directed to a device or method that includes the limitation of “magnetic sensors” or a “magnetic scanhead.” As discussed above, Yoshihara does not disclose the use of a “magnetic scanhead or “magnetic sensors.” Therefore, because Yoshihara does not disclose each element of Applicants’ claims 1-128, Applicants respectfully submit claims 1-128 over Yoshihara under 35 U.S.C. §102(a) for at least this reason.

Further, Applicants’ claims 1-57 and 90-101 include the limitation of “receiving a stack of bills in an input receptacle” or “an input receptacle for receiving a stack of bills.” Yoshihara does not disclose this limitation. Rather, Yoshihara discloses a bill acceptor that receives one currency bill at a time. Therefore, because Yoshihara does not disclose each element of Applicants’ claims 1-57 and 90-101, Applicants respectfully submit that claims 1-57 and 90-101 are patentable over Yoshihara under 35 U.S.C. §102(a) for at least this reason.

Claim Rejections – 35 U.S.C. §102 (Finkel et al.)

Claims 1-145 have been rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 4,442,541 to Finkel et al. (“Finkel”). Applicants respectfully traverse this rejection.

Finkel discloses a device for determining the denomination of U.S. currency by way of magnetic pattern recognition. The Finkel device scans a currency bill along three segments parallel to the long axis of the bill; thus, the long edge of the bill is parallel the transport direction of the bill. (*See* Finkel at col. 1, ll. 54-56 and FIGS. 1-14 and 16.) The magnetic patterns scanned from a bill are then compared against a like plurality of standards for each denomination and a determination is made as to the denomination of the scanned bill.

Applicants’ claims 1-6 include the limitation of “transporting the bills with their narrow dimension parallel to the transport direction.” Oppositely, as discussed above, Finkel discloses that it is the wide/long edge of a bill that is parallel to the transport direction as a bill is transported. Therefore, because Finkel does not disclose each element of Applicants’ claims 1-6, Applicants respectfully submit that claims 1-6 are patentable over Finkel under 35 U.S.C. §102(a) for at least this reason.

Applicants’ claims 1-57 and 90-101 include the limitation of “receiving a stack of bills in an input receptacle” or “an input receptacle for receiving a stack of bills.” Finkel does not disclose this limitation. Rather, Finkel indicates that a currency bill is inserted into a bill reader. (*See* Finkel at col. 3, ll. 58-59 and FIGS. 1-3). Therefore, because Finkel does not

disclose each element of Applicants' claims 1-57 and 90-101, Applicants respectfully submit that claims 1-57 and 90-101 are patentable over Finkel under 35 U.S.C. §102(a) for at least this reason.

Applicants' claims 7-111 include the limitation of "closely spaced magnetic sensors." Finkel does not address how any magnetic sensors in the reader are spaced. Finkel states "the three [magnet scan] paths can be from the top, center, and bottom portions of the bill 30, but need not be; it can be three path in the upper portion of the bill 30 alone" (col. 4, ll. 34-36; *See also*, Finkel at FIG. 3). However, Finkel does not disclose that the sensors (or the paths) are "closely spaced" or how the magnetic sensors are spaced. Therefore, because Finkel does not disclose all the limitations of claims 7-111, Applicants respectfully submit that claims 7-111 are patentable over Finkel under 35 U.S.C. §102(a) for at least this reason.

Applicants' claims 112-128 include the limitation "the plurality of sensors collectively scan a substantially continuous segment of each of the currency bills transported along a bill transport path." Finkel does not disclose that any sensors scan a substantially continuous segment of each currency bill. Therefore, because Finkel does not disclose all the limitations of claims 7-111, Applicants respectfully submit that claims 112-128 are patentable over Finkel under 35 U.S.C. §102(a) for at least this reason.

Claim Rejections – 35 U.S.C. §102 (McInerny)

Claims 1-145 have been rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,761,089 to McInerny ("McInerny"). Applicants respectfully traverse this rejection.

McInerny discloses a document processing apparatus having a counterfeit detection system for identifying counterfeit suspect documents on the basis of the magnetic characteristics of the documents. Magnetic sensing of the documents is accomplished using a single magnetic sensor: "a magnetic field detector, such as read head 86 . . ." (col. 8, ll. 44-45).

Applicants' claims 1-128 include the limitation of "a plurality of magnetic sensors," "a plurality of closely spaced magnetic sensors" or "at least two closely spaced magnetic sensors." McInerny does not disclose the use of a plurality of magnetic sensors; rather, McInerny only discloses a single magnetic sensor – the read head 86. Therefore, because McInerny does not disclose all the limitations of claims 1-129, Applicants respectfully submit

that claims 1-128 are patentable over McInerny under 35 U.S.C. §102(a) for at least this reason.

Claim Rejections – 35 U.S.C. §102 (Walkley et al.)

Claims 1-145 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,759,382 to Walkley et al (“Walkley”). Applicants respectfully traverse this rejection.

Each of the claims pending in the present application are directed to a device or method that include the limitation of “magnetic sensors” or a “magnetic scanhead.” Walkley, however, does not disclose these uses of magnetic sensors or a magnetic scanhead. Rather, Walkley discloses an apparatus for measuring the degradation of the optical properties (e.g., opaqueness) of a bill due to the aging of the paper and the accumulation of oils and grime incident to handling (col. 1, ll. 59-62). Therefore, because Walkley does not disclose each element of Applicants’ claims 1-128, Applicants respectfully submit claims 1-128 over Walkley under 35 U.S.C. §102(a) for at least this reason.

Obviousness-Type Double Patenting Rejections

Claims 1-145 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of the following U.S. Patent Nos., individually: 5,295,196; 5,430,664; 5,467,405; 5,790,697; 5,806,650; 5,815,592; 5,867,589; 5,870,487; 5,875,259; 5,905,810; 5,992,601; 6,012,565; 6,073,744; 6,220,419B1; 6,237,739B1; 6,241,069B1; 6,278,795B1 and 6,311,819B1. Applicants respectfully traverse this rejection.

To formulate an obviousness-type double patenting rejection, the claims of the pending application must be compared to the claims of an application or a patent. *See* MPEP § 804. In the Office Action, none of the claims of the above-identified U.S. patents have been specifically identified as relating to the obviousness-type double patenting rejections. Therefore, Applicants respectfully submit that these obviousness-type double patenting rejections are improper. In order to allow the Applicants to adequately respond to this rejection, the Applicants respectfully request an identification of the specific claim(s) of each of the above-identified U.S. patents or, alternatively, for these obviousness-type double patenting rejections to be withdrawn.

Provisional Obviousness-Type Double Patenting Rejections

Claims 1-145 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 164-327 of copending Application Serial Nos. 09/541,170 and 09/542,487; claims 157, 158 and 164-190 of copending Application Serial No. 09/635,967; claims 164-337 of copending Application Serial No. 09/607,019; claims 164-329 of copending Application Serial No. 09/611,279; and claims of Application Serial No. 09/126,580.

It is noted that claims 1-145 of copending Application 09/611,279 are not pending in that application. Rather, claims 164-329 are pending in that application. Applicants will address the provisional obviousness-type double patenting rejection with respect to the currently pending claims of Application Serial No. 09/611,279.

To formulate an obviousness-type double patenting rejection, the claims of the pending application must be compared to the claims of an application or a patent. *See* MPEP § 804. In the Office Action, none of the claims of the above-identified copending applications has been specifically identified as relating to the obviousness-type double patenting rejections. Therefore, Applicants respectfully submit that these obviousness-type double patenting rejections are improper. In order to allow the Applicants to adequately respond to this rejection, the Applicants respectfully request an identification of the specific claim(s) of each of the above-identified U.S. patents or, alternatively, for these obviousness-type double patenting rejections to be withdrawn.

Further, each of the claims pending in the present application are directed to a device or method that include the limitation of "magnetic sensors" or a "magnetic scanhead." As discussed, a provisional obviousness-type double patenting rejection involves comparing the claims of the present application to the claims of a second applications. None of the cited copending applications claims a method or apparatus with either of these limitations. Therefore, Applicants respectfully submit these provisional obviousness-type double patenting rejections should be withdrawn.

Information Disclosure Statement

Applicants wish to make the Examiner aware that Applicants' "Third Information Disclosure Statement" and the appropriate fee herewith. It is respectfully requested that Applicants' "Third Information Disclosure Statement" be considered by the Examiner and that the cited references be made of record.

New Claims

To the extent that the Examiner considers the above-discussed rejections relevant to new claims 146-149, Applicants respectfully traverse such a rejection. Applicants' new claims include limitations not disclosed by any of the above-discussed references. Therefore, Applicants respectfully submit that Applicants' new claims 146-149 are patentable over the above-discussed references.

Conclusion


In conclusion, Applicants respectfully submit that in view of the amendments and remarks set forth herein, that all rejections have been overcome and that all claims are in condition for allowance and such action is earnestly solicited.

If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact Applicants' undersigned attorney at the number indicated.

Applicants' have enclosed a check in the amount of \$194.00 to cover the fees associated with the filing of this Amendment (and to cover the fees associated with Applicants' Petition For One Month Extension Of Time). However, should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from JENKENS & GILCHRIST, P.C. Deposit Account No. 10-0447(47171-00271USP1).

Respectfully submitted,

Dated: March 5, 2002


Timothy M. Kowalski
Reg. No. 44,192
JENKENS & GILCHRIST, P.C.
225 West Washington Street, Suite 2600
Chicago, Illinois 60606
312-425-3900 (Telephone)
312-425-3909 (Facsimile)

Attorneys for Applicants